



The Halifax Amateur Radio Club

REFLECTOR

PO BOX 663
HALIFAX NS
B3J 2T3

April 2005 Volume 66 Number 4

club web site is www.halifax-arc.org



April 18, World Amateur Radio Day
Canada has declared 2005 the Year of the Veteran



HARC Club Station phone number - 490-6421

See the HARC Web site at: <http://www.halifax-arc.org>

Our executive and committees.

Position Name & Call Sign	Phone #	E-Mail
President - Bill Elliott, VE1MR	865-8567	ve1mr@rac.ca
First V.P. - Fraser MacDougall VE1WO	865-4198	ve1wo@rac.ca
2nd V.P. - Darryll Perrin, VE1HUP	826-1439	ve1hup@rac.ca
Secretary - Howard Dickson, VE1DHD	823-2024	dhickson@hfx.eastlink.ca
Treasurer - John Goodwin, VE1CDD	865-5731	ve1cdd@rac.ca
Member at Large, Tom Caithness, VE1GTC	477-7081	tom.caithness@ns.sympatico.ca
Club Station Mgr. - Pat Kavanaugh, VE1PHK		ve1phk@rac.ca
Past President - Dick Grantham, VE1AI	434-8046	ve1ai@rac.ca

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Public Relations: Wayne Harasimovitch, VE1WPH	832-3660	ve1wph@rac.ca
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Reflector Dist. - Tom Caithness, VE1GTC	477-7081	tom.caithness@ns.sympatico.ca
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Web page - Rob Ewert, VE1KS,	826-1705	ewertr@hfx.eastlink.ca
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EMO Trailer Assembly coord - David Musgrave, VE1EDA	435-4333	ve1eda@rac.ca
Flea market 2004 Chair'man - Ed Grace, VE1EGG	865-8295	ve1egga@rac.ca
Field Day coordinator - NEEDED		
RAC Asst Director - Wayne Marchand, VE1WJM,	860-1580	ve1wjm@rac.ca
NSARA Director - Joe MacPherson, VE1CH	852-1295	jmp@hfx.eastlink.ca
Frequency coordinator for Nova Scotia - Bev Reynolds, VE1TL		

Take-15 Net Controllers

NOTE: There have been some changes. This will be the rotation. If you cannot take the net on your particular evening get in touch with one of the others and trade places with them. If I have left any one off the list, or you want to join, please let Bill Elliott, VE1MR, know.

April 17	Peter	VE1PJW
April 24	Doug	VE1LDL
May 1	Herb	VE1HX
May 8	Dave	VE1EDA
May 15	Charles	VE1MCR
May 22	Chris	VA1CDB



Web Master Wanted

Working with the Halifax ARC ARISS/IRLP Distribution Group your responsibilities will include conceptual design and regular maintenance of a website supporting the newly established IRLP "Discovery" Reflector 9010. Previous experience with web design would be an asset however not a requirement of this posting. Interested parties should contact Wayne, VE1WPH, (ve1wph@rac.ca or 832-3660) for more information.

RAC's web site is www.rac.ca

The **General Monthly Meeting** of the Halifax Amateur Radio Club will take place Wednesday, April 20, 2005 at 1930 hours (7:30 PM), at the former Bloomfield School building (corner of Almon and Agricola streets). The meeting will be held in the Multi-Purpose Room. Entertainment will be a tour of the CBC site at Geisers Hill courtesy of Rob, VE1KS. Guests are welcome.

GENERAL INFORMATION



TAKE-15 NET: Sunday evenings at 8:30 PM on VE1PSR/VHF

CLUB REPEATERS:

VE1PSR/VHF - 147.270 MHz +
VE1PSR/UHF - 444.350 MHz +
VE1PSR/6M - 53.550 MHz +
access tone 151.4 Hz
VE1HNS - 146.940 MHz -

PACKET:

VE1NSD 145.050 MHz LAN NODE
VE1BBS - Local packet BBS
accessible through the LAN

FOR SALE

Open to club members, there is another surplus transceiver for sale. This is a Yaesu FT-101E with a power cable and Shure 444 desk mike, cleaned, tested and in good working condition. Asking \$150 or reasonable offer. Offers accepted until Apr. 20th. Contact Fraser MacDougall, VE1WO at 865-4198 or ve1wo@rac.ca

Deadline for submissions to the May Reflector is Saturday, May 7, 2005

Events for Your Calendar

The **MS Walk** will be held on Sunday **May 1** with a 10:30 start time. Check in time is 9:00 a.m. at the start point which is at the Dalhousie Memorial Arena on South Street. Volunteers are requested to be on-site by 8:30 AM at the latest. There is a BBQ beginning at 12 noon at the start/finish line. The MS Society has requested **6 HAM operators** be available to provide communications. They are always looking for volunteers to do flagging at crosswalks.

June 11 will be the date of the **2005 DownEast Flea Market**

Field Day 2005 June 24, 25, 26.

July 1 – **Canada Day Contest** is a one-day contest beginning at 0001 UTC. Sponsored by RAC, it emphasizes working Canadian stations on HF through 2M.

July – Museum Ships Special Event

July 29 & 30- **IOTA** (Islands On The Air) is an annual event sponsored by the Radio Society of Great Britain

August 13&14 -**MS Bike Tour**

August 13 – The second annual **DX Forum** 0930 – 1630 hrs.

August 19 & 20 – International Lighthouse/Lightship Weekend the HARC will operate once again from the Old Red School House at Peggy's Cove, just a short distance from the lighthouse. Set-up on Friday and operate from Saturday at 0001 UTC to Sunday at 2359 UTC.

The **World Amateur Radio Day 2005** theme is "Radio Amateurs Expanding the World of Wireless Communications".

Celebrated each **April 18**, World Amateur Radio Day marks the anniversary of the founding of the IARU in 1925 and provides an opportunity to present a positive image of Amateur Radio to the general public.

DOWNEAST FLEA MARKET

SATURDAY JUNE 11, '05

Where:

The Halifax Forum Complex
corner of Young and Windsor
St., Halifax

Doors open: for sellers at 0630
for buyers at 0900

The tables are free;

Entry fee is \$3.00 per person

Reserve tables by contacting

David Nimmo at ve1nn@rac.ca

Talk in frequency: VE1PSR
(147.270+)

Ham Social Friday night June 10,
2005 at 1900 at The Jolly Mug. For
information contact ve1pq@rac.ca

Breakfast get together at 0730
June 11/05 at the Steak and Stein,
6061 Young St, Halifax

There will be a talk by Wayne,
VE1WPH, on the ISS set up

Hope to see you there---

73's-----Ed, VE1EGG

Puzzler – Do You Know?

What is the maximum allowable bandwidth a signal may occupy in the 6 Meter band?

Answer on page 8

If you want to use the **Club Station** for an activity please reserve your date & time with Station Manager Pat Kavanaugh, VE1PHK
E-mail ve1phk@rac.ca

"People that hate cats will come back as mice in their next life."

From the RAC desk

Special Prefixes Authorized to Celebrate Opening of the New Canadian War Museum and VE Day + 60

At the request of Radio Amateurs of Canada, Industry Canada has authorized all Canadian radio amateurs to use special event prefixes for the month of May, 2005, to mark the opening of the new Canadian War Museum in Ottawa on 8 May, 2005 coincident with the 60th Anniversary of VE Day.

The official opening of the new Canadian War Museum in Ottawa, the national capital of Canada, on May 8, 2005, coincides with the 60th anniversary of Victory in Europe Day -- VE Day -- which, on May 8, 1945, officially ended the Second World War in Europe.

The year 2005 has been declared The Year of the Veteran by the Canadian government in recognition and commemoration of the determination, service and sacrifice of Canada's WW II veterans.

Canadian radio amateurs are authorized to use the following special event prefixes during the period **1 May to 31 May, 2005** inclusive:

CF for VA stations

CG for VE stations

CH for VO stations

CI0 for VY0 stations

CI1 for VY1 stations

CI2 for VY2 stations.



(Thanks to Jim Dean, VE3IQ
Vice President Regulatory Affairs
Radio Amateurs of Canada

Courtesy of Sohail Anjum., VE3ITU
Forwarded by Chris, VA1CDB.

From the ARRL Letter, Vol. 24, No. 12

AMSAT-NA has issued a call for papers for the 2005 AMSAT Space Symposium and Annual Meeting. (Oct. 7-9 in Lafayette, Louisiana). Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite program. A one-page abstract is due by June 1, with "camera-ready" hard copy or final electronic documents due by August 1 for inclusion in the printed symposium Proceedings. Send abstracts and papers to Daniel Schultz, N8FGV, n8fgv@amsat.org. Details on the AMSAT Space Symposium and Annual Meeting is available on the AMSAT Web site <http://www.amsat.org/amsat-new/symposium/>

PRESIDENT'S MESSAGE

I am sure that we are all glad spring has arrived, even though there will still be some poor weather, at least it is starting to warm up. Of course now is the time of year to start antenna work, which in some cases will take until next fall. We have experienced more high winds this past winter than in previous years so most have some repair to do along with new antenna experiments. One of the things all Amateurs build is an antenna, they can be simple or complicated but there is always that feeling of accomplishment that comes with making a contact on an antenna you built.

On Saturday April 9th the local Amateurs participated in an EMO exercise. While the lessons learned are still to be seen I was impressed with the quality of the exercise. My compliments to the organizers and the participants. The organizers put a lot of effort into this exercise and were rewarded by the participation of many dedicated people to man the sites. Of course more practice is always needed and you will find that you are never 100% prepared for the real thing. I was mainly concerned with technical issues and saw several things that could be improved, mainly with the link system. In many cases the sites were in poor locations that provided a challenge to get a reasonable signal into a repeater. Several sites were able to overcome these issues but a few still had problems that would require extensive technical effort to resolve. Hopefully plans in progress will alleviate some of these problems in the future. I was originally going to simulate losing the main net repeater so the group would need to find an alternate solution, but time and other constraints restrained me. Give some thought to how you would organize it if the main repeaters were off air or otherwise not usable. Given the terrain and propagation of VHF, HRM is a difficult area to cover. Again I congratulate all involved with Exercise Sandpiper.

73 - Bill, VE1MR

From the ARRL Letter, Vol. 24, No. 10 **NEW QST COLUMN AIMS TO
TAKE MYSTERY OUT OF MODERN HAM GEAR**

A new QST column, "Getting to Know Your Radio" debuts in the April edition of QST. Author and ARRL Product Review Editor Joel Hallas, W1ZR, says the column "basically talks about what all those knobs do" on modern equipment.

"The idea is to acquaint users with the typical features of modern radios." Hallas says there was a time when radio receivers were pretty easy to understand--in some cases not all that much different from the broadcast set in the kitchen or living room--so most new amateurs could quickly learn their way around the front panel. It's a new world now.

"It's fair to say that modern transceivers have come a long way since the boat anchors of the 1950s and earlier," he says. "Many transceiver makers seem to sell their wares by claiming the most and newest features." As a result, modern ham transceivers can be pretty intimidating, making operation daunting for newcomers and veterans alike.

The first installment of "Getting to Know Your Radio" will cover the now-popular--and common--passband tuning feature. Hallas says a column on audio compression systems is in the works.

NET CONTROLLERS

I have added two new net controllers and I would like to see at least two more if possible. It is an easy job and with an increasing number of net controllers you would only be doing the net a few times a year. This is an easy way to do something for the club

Thank you for reading.

Bill Elliott, VE1MR

Phone - 865-8567

E-mail - ve1mr@rac.ca

Industry Canada has issued an authorization to Bob Cooke, VE3BDB, to operate **May 7 to 14** inclusive using the **special event call sign CF3VEDAY**.

The authorization is to mark the opening of the new Canadian War Museum on May 8, 2005, a date that coincides with the 60th anniversary of VE-DAY, which ended World War Two in Europe. The special call sign is historic in that this is the first time that an Amateur Radio call sign having a five-letter suffix has been issued in Canada.

VE3BDB and other members of The Wireless Set No. 19 Group will alternate modern equipment with vintage WW II era military radios during the seven-day operation.

Full information can be viewed online at <http://www.qsl.net/cf3veday>

From Sohail Anjum, VE3ITU.

*For those who have difficulty
converting units:*

- ◇ 1,000,000 aches = 1 megahurtz
- ◇ 2 million bicycles = 2 megacycles
- ◇ 365.25 days = 1 unicycle
- ◇ 52 cards = 1 decacards
- ◇ 1 millionth of a fish = 1 microfiche
- ◇ 1 trillion pins = 1 terrapin
- ◇ 10 rations = 1 decoration
- ◇ 100 rations = 1 C-ration
- ◇ 2 monograms = 1 diagram

DX n' HF for April 73 de The New Digital World for Radio Amateurs

- *PSK31 and Much More*

By D. Howard Dickson - VE1DHD

My XYL gave me a great birthday gift this year – a RIGblaster Plus from West Mountain Radio. And am I having a BLAST!!

So, what is a RIGblaster you may ask? Well according to the manufacturer, it is the easiest way to properly connect your radio to your computer's sound card so that you may operate using any present or future ham radio sound- card software.

The currently available sound-card software for Amateur Radio applications is quite extensive. There is of course PACKET, PACTOR, AMTOR RTTY and SSTV. The RIGblaster will also allow you to do computer driven CW and Contest Voice Keying, and the software for all or most of these modalities is free and it all comes on a CD with your new RIGblaster. However, the new digital modality that intrigued me most was PSK31 and the RIGblaster supports this as well.

What is PSK31? First let me tell you what it is not. PSK31 is NOT a digital mode that is going to make obsolete the current standards - Pactor, Pactor-2, or Clover-II, although many may argue that Clover may have actually rendered itself obsolete...but that is another story for another time. Additionally, PSK31 does NOT offer error-free links and it can NOT be used to transmit files or access mailboxes. So there are clearly some limitations, and if you need to transmit files and need the assurance of error checking for error-free message transmission, then you likely need Winlink 2000 and should read my article on Winlink 2000 in the March 13th edition of the *Bulletin*. Now having said what PSK31 won't do, here is what PSK31

is and what it will do.

The term – PSK31 – is an acronym for "Phase Shift Keying, 31 Baud". PSK31 is a new modality for Radio



Amateurs; well, new since 1999 or so. It is a new form of modulation that allows a much higher level of performance in keyboard-to-keyboard communication.

The PSK31 platform is based on an idea by Pawel Jalocho - SP9VRC - that was subsequently refined and developed by Peter Martinez - G3PLX - the father of AMTOR. In an article that appeared in *RadCom*, the journal of the Radio Society of Great Britain, Peter explained why he developed PSK31. Simply put, he wanted to create a mode that was as easy to use as RTTY, yet much more robust in terms of weak-signal performance. Another criterion was bandwidth. The HF digital sub-bands

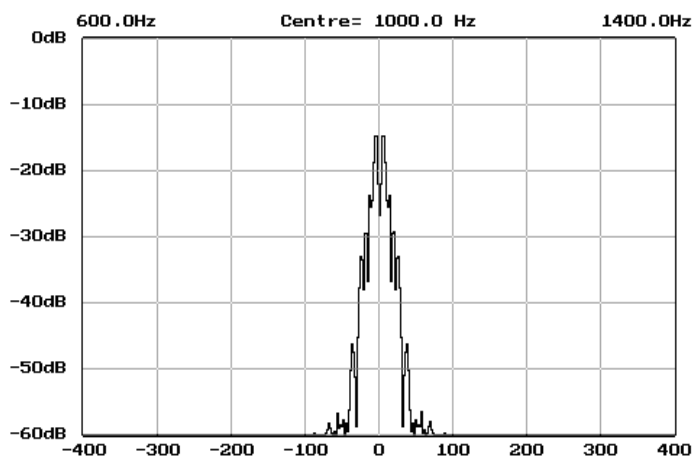
are narrow and tend to become crowded in a hurry (particularly during contests). Peter wanted to design a mode that would do all of its tricks within a very narrow bandwidth.

Instead of using Frequency Shift as

a method of keying (FSK), PSK31 uses Phase Shift Keying or PSK. It employs an alphabet similar to Morse code, and this allows for text transmission speed of about 50 wpm. PSK31 is particularly attractive since it does not require any handshaking with a second radio station, and this allows for roundtable QSO's with more than two stations. PSK31 also uses an incredibly narrow bandwidth that is equal to the baud rate and the baud rate which is 31.25. When a narrow CW filter is employed, operators can in fact achieve a bandwidth of 31Hz, but in practical terms, the bandwidth for most operators will be in the range of 100 Hz. However, this still means that you can work at much lower signal levels in the crowded digital bands. PSK31 also uses the computer Sound Card instead of a TNC and this results in additional savings – that is monetary savings.

PSK31 has only been around for five years, but its use and popularity in the Radio Amateur community is growing exponentially. The big question on the minds of many Hams is, will it replace RTTY and other modes for person-to-person communications? I would not be surprised if it did. Just look at the way it has been adopted as a digital contesting modality. What's more, it is fun and easy to use, and does not cost an arm and a leg to get set up.

(Continued on page 5)



(Continued from page 4)

How Does PSK31 Work? To start, let's look at Morse code. Morse is a simple binary code expressed by short signal pulses (dits) and longer signal pulses (dahs). By combining strings of dits and dahs, we can communicate the entire English alphabet along with numbers and punctuation. Morse uses gaps of specific lengths to separate individual characters and words.

When it comes to RTTY we are still dealing with binary data, but instead of on/off keying, we send the information by shifting frequencies. This is known as Frequency Shift Keying or FSK. One frequency represents a mark (1) and another represents a space (0). If you put enough mark and space signals together in proper order according to the RTTY code - the RTTY code shuffles various combinations of five bits to represent each character - you can send letters, numbers and a limited amount of punctuation. For example, the letter A is expressed as 00011. To separate the individual characters RTTY must also add "start" and "stop" pulses.

For PSK31 a new code was devised that combines the best of RTTY and Morse and is called the "Varicode" because a varying number of bits are used for each character. Building on the example of Morse, the author allocated the shortest codes to the letters that appeared most often in standard English text. The idea was to send the least number of bits possible during a given transmission. For example: E is a very popular letter on the English alphabet hit parade, so it gets a Varicode of 11.

Z sees relatively little use, so its Varicode becomes 111010101.

As with RTTY, however, we still need a way to signal the gaps between characters. The Varicode does this by using "00" to represent a gap. The Varicode is carefully structured so that two zeros never appear to-

gether in any of the combinations of 1s and 0s that make up the characters.

But how would the average ham generate a PSK31 signal and transmit Varicode over the airwaves? The answer was to use the DSP (digital signal processing) capabilities of the common computer sound card to create an audio signal that shifted its phase 180° in sync with the 31.25 bit-per-second data stream, with a 0 bit in the data stream generating an audio phase shift, however, a 1 does not. The technique of using phase shifts (and the lack thereof) to represent binary data is known as Binary Phase-Shift Keying, or BPSK. If you apply a BPSK audio signal to an SSB transceiver, you end up with BPSK modulated RF.

The combination of narrow bandwidth, an efficient DSP algorithm and synchronized sampling creates a mode that can be received at very low signal levels. In fact, PSK31 rivals the weak-signal performance of CW and it is a vast improvement over RTTY.

What Do You Need to Get Started? The first step is to jump onto the Web and download the latest version of PSK31.

PSK31 requires a standard ham station (VHF or HF), a computer with a SoundBlaster 16 compatible sound card, some free software and a very simple four component circuit if you wish the computer to control Tx switching. I purchased a RIGblaster to achieve this control, but there is a great deal of information out there for those who have the skill and want to build it themselves.

If you are not concerned with Tx switching, then you just want a straight audio connection between your rig and the computer, and a couple of shielded mini-plug stereo cables will do. If your radio has an

accessory jack that offers an audio line output, this is the preferred way to feed receive audio to your PC. Connect one shielded cable between the radio line output and the sound card's line input. If your radio does not have a line output, you'll have to use the external speaker jack.

For transmit audio, use another shielded cable and connect it between your sound card's speaker or line output jack and the accessory audio input of your transceiver. You can also opt to route the transmit audio to your microphone jack, but you'll need an attenuator if you do that. If you use the accessory audio input, don't forget to disconnect your microphone before you go on the air. When you key the transceiver, the microphone may be "live," too!

That's it. A couple of shielded cables, some free software, your rig and your shack's computer and you will be communicating with PSK31 in nothing flat. I have only been active using PSK31 for a little over two weeks but I have to tell you that it has given Amateur Radio a whole new meaning for me, and the big bonus is that my next door neighbour doesn't complain about my HF signal getting into his TV's surround sound system because PSK31 is truly QRP and I am only running 5 or 10 Watts at the most.

Give PSK31 a try. I guarantee you will fall madly in love with it.

Material for this article was obtained from the following sites which provide a wealth of information that you should know about before you start to link your computer and radio for PSK31 operation:

From: <http://www.qsl.net/wm2u/psk31.html> lots of free software here too.

From ARRL: <http://www.arrl.org/tis/info/psk31.html>

From ARRL: <http://www.arrl.org/tis/info/HTML/psk31/index.html>

Halifax Amateur Radio Club Minutes of the General Monthly Meeting of Wednesday, March 16th, 2005

President Bill (VE1MR) called the meeting to order at 1935 with 44 members in attendance.

Executive in attendance:

Bill Elliott (VE1MR) – President;; Fraser MacDougall (VE1WO) – First Vice-president;; Second Vice-president – Darryl Perrin (VE1HUP); John Goodwin (VE1CDD) – Treasurer; Howard Dickson (VE1DHD) – Secretary; Pat Kavanaugh (VE1PHK) – Station Manager; Tom Caithness (VE1GTC) – Member-at-Large.

Regrets: Dick Grantham (VE1AI) Past-president

Silent Keys: Clary Pelley – VE1AVP

Guests: Brian – VE7NGR; Dave – VE1PDX; Trevor – VE1TRD; Annabelle Poirier

Minutes of the monthly meeting of February 16, 2005:

MOTION - Approval of the minutes of the January monthly meeting as published in the February 2005 Reflector was moved by Doug (VE1LDL) and seconded by Jim (VE1SFX) – Jim (VE1SFX) also requested that the minutes be corrected to reflect the following change:

Under - Reports & Announcements: Jim (VE1SFX) reported that John (VE1WS) was slowly recovering from a motor vehicle accident and that several Hams were going to assist with antenna repairs at his place.

With that correction, the Motion carried.

Executive Reports:

Treasurer – John reported a February month-end bank balance of \$9,654.69. A hard copy of the report was not available.

MOTION – acceptance of the Treasurer's Report was moved by Dave (VE1NN) and seconded by Peter (VE1PJW). Motion carried.

Secretary – Howard (VE1DHD) had

nothing to report.

President – Bill commented on the good turnout of 39 for the Ham Breakfast.

First Vice-president – Fraser (VE1WO) reported that Doug (VE1LDL) had been the successful bidder on the Yaesu FT-101ZD transceiver that the Club was selling.

Callbook Sales - Fraser also reported current Callbook sales at 940 sold – 260 left in stock.

Second Vice-president – Darryl (VE1HUP) informed the membership that the Entertainment for the evening would include a talk on High Voltage Safety by Larry Arthur, Line Crew Forman with NS Power. Next month, Rob (VE1KS) has arranged a tour of the CBC transmitter site on Geizer's Hill.

Station Manager - Pat (VE1PHK) reported that he has two of the refurbished laptop computers up and running and is working on the others.

Member-at-Large – Tom (VE1GTC) Nothing to report.

Committee Reports:

Membership – Tom (VE1GTC) reported that as of 16 March, there are 132 paid-up members for 2005 (101 Full / 29 Associate / 2 Life). Those who have not yet paid dues for 2005 (\$25) are encouraged to do so as soon as possible.

Search & Rescue – Dave (VE1AJP) reported that the new Ground S&R ICOM radios are working well and that they are attempting to secure funding to purchase the GPS capable microphones. He also informed the membership that Halifax Ground S&R are beginning a fund-raising drive to support the purchase of a new \$450,000 Logistics Vehicle for search & rescue.

EMO – Tom (VE1GTC) reported Exercise Sandpiper will take place on April 9th. Dave (VE1EDA) requested that anyone interested in participating in this exercise contact him by email as soon as possible.

Tom also reported that two recent EMO Communication Training Sessions had gone very well.

Flea Market 2005 – Dave (VE1NN) reminded the membership of the upcoming Down East Flea Market to be held at the Halifax Forum Annex on Saturday, June 11th, with a Friday evening reception at the Jolly Mug and a breakfast Saturday at the Steak and Stein. All are welcome. Tables are free to sellers, and admission for all is \$3.00. Doors will open at 9am this year to buyers, and advance entrance tickets will be on sale at the Steak and Stein during the breakfast. At present, because of conflicts with other flea markets in Ontario, it appears that there may not be any commercial exhibitors this year.

Canadian Coast Guard Auxiliary S&R Competition – Scott (VE1QD) reminded the membership of the Club's commitment to set up a portable Special Event Station for the weekend of the competition (September 30/October 1). The station will be located in Dartmouth at the Coast Guard Station on Friday and will be moved to the Maritime Museum of the Atlantic on the Halifax side for Saturday.

Upgrades to VE1HNS – Rob (VE1KS) reported that the controller program had been updated and debugged. The IRLP computer had been upgraded as well. The Club has also purchased a 5 megabit bandwidth for the IRLP node and will set up a Reflector site that will be used for the ARISS School Program - communications with the International Space Station. This reflector will also be used to allow schools to monitor and communicate with an upcoming expedition to Mt. Everest. Finally, Rob reported on the overall recent usage of the Club website.

Old Business:

There was none.

New Business:

There was none

(Continued on page 8)

Eleven New Hams Join the Radio Amateur Ranks

By D. Howard Dickson - VE1DHD

The 2005 Basic Amateur Radio class conducted by the Halifax Amateur Radio Club has seen eleven of its members successfully pass the 2005 Basic Amateur Radio examination this year.

The following will give you a sense of the diverse backgrounds of these individuals and some of the reasons why they got interested in Ham radio. These newly licensed hams are:

Lorne Burke, VE1LGB, ## is a Spectrum Management Officer with Industry Canada, working out of both Sydney and Halifax. Lorne's interest in Amateur Radio was clearly driven by his new job with Industry Canada.

Andrew Crawford, VE1VAC, is a computer programmer and he studied digital electronics in college. Andrew is interested in CW and has written software to assist with learning Morse Code.

Wes Doiron, VA1WES, is an insulator mechanic and a member of the Halifax Ground Search and Rescue Group. Wes became interested in Amateur Radio because so many of the GS&R team members are Hams, and so much of their communication is carried out on the Amateur bands.

Jason Humphrey, VE1PLF, is an electronics technologist working with a company at Shearwater. Jason is also in the military reserves. His interest in public service and communication in general brought him to the course this year. Jason also recently completed his CW exam.

Nicole King, VE1NDX, the youngest member of the 2005 class, is in grade eleven and took the course out of interest in Amateur Radio that she has had since childhood. Her dad is Wayne King - VE1NR.

Jerry Lockett, VA1YOT, is a freelance journalist & editor. Jerry is also a sailor and was introduced to Amateur Radio when the Canadian Power Squadron Off-shore Sailing class visited the Halifax Amateur Radio Club



Halifax Amateur Radio Club Basic 2005 Ham Class Graduates

Station last year to learn about operating marine mobile HF on the Amateur Radio bands.

Frank Mallais, VE1JFM, ## is an avionics technician and was convinced by a friend to get involved in Amateur Radio. It is the communication aspect of the hobby that appeals to Frank.

Mohammed (Khaleel) Khalelullah, VA1MAK, works for a local company in the information technology field. Khaleel's interest in public service and making new friends brought him to Amateur Radio.

Ken Rojas, VE1KJR, is a retired maintenance engineer, radio operator and radio navigator with 13 years service in the R.C.N., Air Traffic Control & Marine Communications with the D.O.T. Ken is interested in using Amateur Radio in Search and Rescue and in general communication with other Hams around the world. Ken has also successfully completed his CW course and literally "blew the Examiner out of the water" with the speed that he could send with his 'straight key'.

Ralph Rosere, VE1RAR, is an optometrist practising in Dartmouth. A dentist neighbour of Ralph's took the course recently and convinced him to sign up this year. Ralph has long had an interest in Amateur Ra-

dio but had never made the time or commitment to get formally involved.

Bob Schwartz, VA1SCH, is a Canadian Forces Air Navigator and a sailor. Although his technical background is a natural for Amateur Radio, it was his desire to equip his sailboat with Amateur Radio HF gear brought him into the course this year

Terry Myer, VE1DTY, makes 12. Terry contacted the course organizers after the course was well underway and so was too late to registering for the 2004/2005 course. However, eager to get his license this year, he bought the Study Guide and did the work on his own, successfully passing the Basic exam this winter. So, a special CONGRATULATIONS to Terry.

When you hear them on the air please congratulate them and involve them in on-air discussions. We hope that they will all remain members of the Halifax Club and will take an active role in all of our Club's upcoming activities, starting with the Down East Flea Market and Field Day this June.

Note: ## At publication time the call signs for Lorne and Frank had not officially been assigned, however, based on availability and choice, the call signs listed here are most likely to be assigned. Once Lorne and Frank have received their official call allocations I am sure that they will be on the air and active.

From the Mail Bag



Did you see the article in QST March 05 addition with our buddy Al Penny involved in a bear search? Quite interesting, it's on page 43. He's using his fox hunting skills to find a bear with a radio collar that the scientists couldn't find. Good reading but long for the HARC Reflector.



Doug VE1DFG

"Receiving the Reflector by email has a wonderful advantage over the paper copy... while I am reading the nicely coloured version I can cut and paste all the meeting times and info.



directly into the calendar on my PC."

Rick VE1RGG

From a Dataforth Application Note Samuel B. Morse (1791 – 1872) was born in Charlestown,, Massachusetts. He studied art at Yale and the Royal Academy of Arts in London and was by 1815 a moderately successful artist. In 1832, Morse became interested in developing the telegraph; he established a working model in 1836 and received a patent in 1844. On May 24, 1844, Samuel B. Morse sent his now famous message "What hath God wrought?" Morse's telegraph changed how the world communicated and his "code" is still in use today. Prior to Morse's efforts, Joseph Henry worked on telegraphic concepts; however, Morse put those principles into practice and is credited with the first practical application of electricity.

Courtesy of George, VE1CAW

Check into the
Maritime Noon Net, week days at 12
noon on the Gore repeater,
146.640 – MHz

*No matter what happens,
somebody will find a way to take it
too seriously.*

Do You Need QSL Cards?

The Halifax Amateur Radio Club is doing a run of QSL cards and has room for a few more people to join in on this current print run. At present we have about 12 different cards to be included and the cost at this point for 1000 cards will be \$110 + tax for 10pt card stock with high gloss and full colour on one side and black text and no gloss on the back side. If we can get an additional six people to join this card run the cost per 1000 cards will come down around \$98 + tax.

If you don't already have a card design, we can help you with that. All we need is a colour (digital .jpg file format) photograph that you want on your cards, along with the other basic information - Call Sign; Grid Square; address etc.

If you are interested, please contact
Howard Dickson - VE1DHD -
(VE1DHD@RAC.ca)
as soon as possible. We will be going to press early in May.



Answer to puzzler on page 2

The maximum allowable bandwidth a signal may occupy in the 6 Meter band is 30 KHz

From the ARRL Letter, Vol. 24, No. 12 Receiving the Dayton Hamvention Special Achievement Award is D. Bharathi Prasad, VU2RBI, a prime mover behind the VU4RBI/VU4NRO DXpedition to the Andaman & Nicobar Islands in December. When earthquake and tsunami struck the region Dec .26, Bharathi immediately shifted the Dxpedition into an emergency communication operation. Her efforts and those of the other DXpedition team members received widespread media attention. One news account dubbed Bharathi "Angel of the Seas" for re-establishing communication links with the Indian mainland and other parts of the stricken region. Web site <<http://www.hamvention.org>>

Minutes (Continued from page 6)

Reports & Announcements:

Jim (VE1SFX) reported that John (VE1WS) was getting around slowly and recovering well from his accident.

Howard (VE1DHD) announced that the Club will be proceeding with plans to have full-colour QSL cards printed. He indicated a per 1000 card price of under \$130 plus tax and asked anyone interested in having cards printed to contact him by email – VE1DHD@RAC.ca.

Scott (VE1QD) reminded the membership of the upcoming summer DX and Contesting opportunities that he had outlined in the March Reflector, and encouraged everyone to take an active involvement in these activities.

Door Prize – was a perpetual flashlight and two rolls of 35mm film and was won by Pierre, VE1PTR

50:50 Draw - the draw (\$26.00) was won by Jim (VE1JIM).

Meeting adjourned at 2015 hrs.

Respectfully submitted by: Howard
Dickson, VE1DHD, Secretary

From the ARRL Letter, Vol. 24, No.10 An international team gathered in Marburg, Germany, in late Jan. to review progress on the Phase 3 Express (P3E) Amateur Radio satellite--essentially a scaled-down,. Simpler version of the now-defunct AO-40. The meeting focused on the design of the integrated housekeeping unit (IHU-3) computer and the "CAN-Do interface." AMSAT-NA is a partner in the P3E high-altitude, elliptical-orbit satellite, a prelude to the ambitious Mars-orbiting P5A spacecraft. Being developed under AMSAT-DL leadership, P3E will provide a test bench for technology under development for the subsequent Mars mission. Launch is planned before the end of 2006. The P3E satellite will offer both analog and digital communication on VHF through microwave. For more info on P3E & P5A see the AMSAT-DL Web site

<<http://www.amsat-dl.org/>>

Working on Roofs -

Reasearched & written by
Terry Bigelow, VE1TRB

(From the Occupational Health and Safety Regulations)

After much research regarding working on roofs, I have come up with the following information from the Occupational Health and Safety Regulations; In a nut shell, if you are going to have someone working within 2 meters of the edge of a flat roof, that is more than 3 meters high, you must have a fall protection plan in place. This is considered as the "control zone". This control zone may need adjusting, depending on the condition of the work surface.

You can employ a dedicated safety monitor if work is to be conducted in that zone (as outlined in this article), provided the worker is not required to work on the edge of the roof. If a safety monitor is to be used, that person will be dedicated to that job and that job alone. If a worker is required to work directly on the edge, a fall protection system must be employed so as to stop the employee from going over the edge, and if he does go over the edge he will be restrained from falling any more than one foot, so that he can recover from the fall himself.

The following is an extract from the COSH Regulations, hope this clears up any questions. Any further concerns can be found at the following web site:

<http://regulation.>

healthandsafetycentre.org/s/Part11.asp#SectionNumber:11.2

After a real crusher of a landing in Phoenix, the flight attendant got on the PA and said, "Ladies and gentlemen, please remain in your seats until Captain Crash and the crew have brought the aircraft to a screeching halt up against the gate. And, once the tire smoke has cleared and the warning bells are silenced, we'll open the door and you can pick your way through the wreckage to the terminal."

Part II – Fall-Protection Systems**PART II****Fall-Protection Systems**

12.10 (1) Where a person, other than an employee who is installing or removing a fall-protection system in accordance with the instructions referred to in subsection (5), works from

(a) an unguarded structure that is

(i) more than 2.4 m above the nearest permanent safe level, or

(ii) above any moving parts of machinery or any other surface or thing that could cause injury to an employee upon contact,

(b) a temporary structure that is more than 6 m above a permanent safe level, or

(c) a ladder at a height of more than 2.4 m above the nearest permanent safe level where, because of the nature of the work, that person cannot use one hand to hold onto the ladder, the employer shall provide a fall-protection system.

(2) The components of a fall-protection system shall meet the following standards:

(a) CSA Standard Z259.1-1976, Fall-Arresting Safety Belts and Lanyards for the Construction and Mining Industries, the English version of which is dated November, 1976, as amended to May, 1979 and the French version of which is dated April, 1980;

(b) CSA Standard Z259.2-M1979, Fall-Arresting Devices, Personnel Lowering Devices and Life Lines, the English version of which is dated November, 1979 and the French version of which is dated October, 1983; and

(c) CSA Standard Z259.3-M1978, Lineman's Body Belt and Lineman's Safety Strap, the English version of which is dated September, 1978, as amended to April, 1981 and the French version of which is dated April, 1980, as amended to April, 1981.

(3) The anchor of a fall-protection system shall be capable of withstanding a force of 17.8 kN.

(4) A fall-protection system that is used to arrest the fall of a person shall prevent that person

(a) from being subjected to a peak fall arrest force greater than 8 kN; and

(b) from falling freely for more than 1.2 m.

(5) Where an employee is about to install or remove a fall-protection system, the employer shall

(a) prepare written instructions for the safe installation or removal of the fall-protection system; and

(b) keep a copy of the instructions readily available for the information of the employee. SOR/88-632, s. 50 (F); SOR/94-263, s. 47(F).

Section 11.2(1)(a) of the OHS Regulation requires a fall protection system to be used when work is being done at a place where a fall of 3 or more metres may occur.

How is the fall height (3 metre or more distance) determined when the worker is on a sloped roof? At a minimum, this will be the distance from the bottom edge of the roof to the next safe lower surface or ground below. The vertical distance from the worker's position to the unguarded roof edge should be added when on a roof with a slope greater than 4 vertical in 12 horizontal. However, section 20.75 requires a worker on a roof with a slope ratio of 8 vertical in 12 horizontal or greater to use personal fall protection, or a safety net be used, and that toe holds be installed if the roofing material will allow for them to be installed. See also OHS Guideline G20.73.

This allowance for a potential increased fall distance when on a sloping surface should also be considered for other sections of the OHS Regulation that specify a fall distance.

Part III – Selecting a method of fall protection will appear in the next issue of the HARC Reflector -ed.

Gary Bartlett (VE1RGB) Receives Elecraft DX Chaser Award

Gary is only the third person to receive the prestigious Elecraft DX Chaser Award and is now in the "Elecraft Award Winner's Hall of Fame" – go to the following web site and have a look –

<http://www.qsl.net/w2lj/index%20page%2011.html>

This award is granted to Elecrafters – Hams who have build their own Elecraft transceivers from Elecraft kits, and who have used their Elecraft rigs to establish communications with at least 100 different DXCC entities.

Gary operates CW, using his Elecraft K2 and a simple wire antennas to accomplish this feat.

I talked with Gary about his award and he told me that "The Elecraft K2 (and their other rigs) has caused a huge number of semi-active hams to rekindle their kit building interests just for the sheer fun of putting it together and getting it aligned and, once the thing is built and one discovers how well it works, well -- what's to do but operate the damn thing! They have sold nearly 5,000 of the K2s and I have long since lost track of how many guys have learned CW for the first time, or awakened a dormant CW background, as the result of the K2. Interestingly enough, because of their great front ends, ease of operation, full range of features, and CW filters, they are very popular within the contesting community



(frequently driving big PAs) and they have been featured as the only rigs on more than one DXpedition. Furthermore, in my 61 years I have never seen a company so focused on product/after sales support. Their unofficial motto is, - We will not let you fail."

With true passion for his K2, Gary likens the K2 to his first girl-friend. He just can't keep his hands off that K2!

By D. Howard Dickson, VE1DHD

From the ARRL Letter, Vol. 24, #10, ARRL-sponsored forums and activities will highlight the League's 2005 National Convention, held in conjunction with Dayton Hamvention® May 20 through 22.

A complete slate of convention forums is available on the Dayton Hamvention Web site

<<http://www.hamvention.org>>.

The theme of Dayton Hamvention 2005 is "Bringing hams together from around the world."

From the ARRL Letter, Vol. 24, No. 12, March 25, 2005

CQ magazine has introduced the CQ DX Field Award to recognize making two-way contact with at least 50 of the world's 324 "grid fields." The CQ DX Field Award is based on the Maidenhead Grid Locator system, already popular among VHF DXers and contesters, in which the world is divided--based on latitude and longitude--into 324 10x20-degree fields, and each field is broken up into 100 1x2 degree grid squares or locators. CQ DX Awards Endorsements will be issued for each additional 50 fields up to 150. Further endorsements will be available in increments of 25 fields, up to the 324 maximum. Contacts made on or after January 1, 1980--when the grid system was adopted for Amateur Radio use--may be applied toward the new award. Full details and rules will appear in the April 2005 issue of CQ and posted on the magazine's Web site <<http://www.cq-amateur-radio.com>>

HAM WINS ON JEOPARDY

Sixteen-year-old Michael Braun, K3LNT has won the Jeopardy Grand prize. Michael, who is now the captain of the team told the Washington Post that he knew everything academic-related that came up on Jeopardy with very few exceptions. That took him though all the preliminary rounds and to the finals where he came in with a \$9,400 lead over his nearest competitor. In the final episode broadcast Tuesday Feb. 8, in the USA Michael got off to a slow start, getting beaten on the buzzer for the first few questions. But he picked up speed with a slew of answers on chemistry, geography and even Mary-Kate and Ashley Olsen.

The series was taped last October, but Michael had to keep quiet about the outcome until the final round was broadcast. Michael says that he will use the money won on Jeopardy for his college education.

(thanks to WB3GXW, Washington Post, via ARNewsLine)
Rob VE1KS

A hangover is the wrath of grapes.

From the ARRL Letter, Vol. 24, No. 10 AMSAT-NA has announced that the Echo (AO-51) Command Team has set up an AO-51 Operations Group to help monitor the satellite and develop operational schedules. Members were selected based on their interest and participation in the varied modes available via Echo and on their active membership in an AMSAT organization. Current members are Mike Kingery, KE4AZN; Drew Glassbrenner, KO4MA; Clare Fowler, VE3NPC, and Roy Welch, W0SL. The AO-51 Operations Group invites users' requests or suggestions on the Echo schedule, preferably before the team begins work on the next schedule. The team typically starts setting up the next schedule two weeks before the end of the previous month. Contact the AO-51 Ops Group via e-mail

<ao51-modes@amsat.org>

--AMSAT News Service